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- b) a second layer comprising a thermosetting material, said thermosetting material containing a silane and a curing agent comprising isocyanate groups;
- c) a third layer comprising a thermoplastic material, said thermoplastic material impregnated with a reactive resin;

wherein an interface between said first and second layers comprises covalent bonds between said silane in said second layer and minerals in said first layer;

wherein an interface between said second and third layers comprises covalent bonds between said isocyanate groups of said second layer and said reactive resin of said third layer; and

wherein said first second and third layers are bonded together with sufficient shear strength to transmit and distribute loads between said layers.

48. (New) The conduit of claim 47, wherein said first layer comprises a cementitious, ceramic, clay, brick, or metallic substrate.

49. (New) The conduit of claim 47, wherein said thermosetting material is polyurethane resin.

50. (New) The conduit of claim 47, wherein said thermosetting material contains a surfactant.

51. (New) The conduit of claim 47, wherein said reactive resin is poly(vinyl chloride-co-vinyl acetate-co-2-hydroxypropyl acrylate).

52. (New) The conduit of claim 47, wherein said thermoplastic material is PVC.

53. (New) The conduit of claim 47, wherein said PVC has a tensile strength of between 5,000 to 10,000 psi.

54. (New) A method for lining a porous, mineral-containing conduit, said method comprising the steps of:

- a) impregnating a sheet of thermoplastic material with a reactive resin;
- b) positioning said sheet of thermoplastic material within the interior of said conduit spaced apart from an inner surface of said conduit;
- c) inserting a thermosetting material between said sheet of thermoplastic material and said inner surface, said thermosetting material containing a silane and a curing agent comprising isocyanate groups;

wherein said silane forms covalent bonds with said minerals in said conduit;

wherein said isocyanate groups form covalent bonds with said reactive resin of said thermoplastic sheet;

wherein said thermoplastic sheet, said thermosetting material, and said conduit are bonded together with sufficient shear strength to transmit and distribute loads between them.

55. (New) The method of claim 54, wherein said first layer comprises a cementitious, ceramic, clay, brick, or metallic substrate.

56. (New) The conduit of claim 54, wherein said thermosetting material is polyurethane resin.

57. (New) The conduit of claim 54, wherein said thermosetting material contains a surfactant.